

the claims.

WHAT IS CLAIMED IS:

1. A wide-band antenna device mounted on a circuit board including a contact and a radio frequency module electrically connected to the contact, comprising:

a plane antenna formed of a thin film based magnetic material; and

5 a metal cover releasably secured to the circuit board and including a rectangular recess and a slit adjacent one side of the recess for permitting a bent end of the plane antenna to pass through to be electrically connected to the contact;

wherein the plane antenna being glued or adhered to the rectangular  
10 recess of the metal cover by insulating adhesive and bridged to the metal cover by a conducting wire so as to utilize the gain effect of the metal cover itself.